Pitch Canker Pathogen Found on the Eldorado National Forest

In November 2003, the New Zealand Ministry of Agriculture and Forestry reported that DNA evidence had confirmed the presence of the pitch canker fungus in one yellowed graft from a consignment of Douglas-fir cuttings imported from the Badger Hill Orchard on the Eldorado National Forest.

- The cuttings were under quarantine when the fungus was detected, and have since been destroyed.
- New Zealand has suspended further imports of host material.

Forest Service and UC Davis researchers have confirmed the discovery of the pitch canker pathogen (*Fusarium circinatum*) on two Douglas-fir trees at the Badger Hill seed orchard on the Eldorado National Forest.

- Researchers at UC Davis and the Forest Service have examined the source tree and other Douglas-fir trees at Badger Hill for symptoms of pitch canker.
- Visual inspections and laboratory testing have found no further trace of the fungal disease in any other trees in the area.
- The two infected trees have been destroyed.

While the Forest Service is seriously concerned about the potential for dispersal and spread of pitch canker in the Sierra Nevada, there is no immediate cause for alarm.

- The effects of the pitch canker pathogen on Douglas-fir in the Sierra Nevada are expected to be minimal.
- Douglas-fir is not a preferred host of *Fusarium circinatum*. Symptoms of infection in coastal areas are limited to dieback of branch tips.
- Because the pitch canker pathogen appears to prefer moist, warm environments for infection and growth, the climate of the Sierra Nevada may limit the spread and impact of disease on Douglas-fir as well as on pines.

The Forest Service, the state of California, university research and forest industry are working together to identify the scope of the threat and the necessary precautionary actions, if any, that are needed to protect trees in the Sierra Nevada.

- The good news is that the pathogen has been detected early. Now we can take immediate and proactive steps to prevent spread of the disease.
- Plans to survey and monitor for pitch canker at locations adjacent to Badger Hill, in the Sierra Nevada, and at other orchard facilities throughout California are being formulated.

Spores from the pitch canker fungus can be spread by wind, insects and movement of infested soil and plant materials.

- There are no chemical treatments available, so prevention efforts focus on controlling the movement of host material, reducing infected plants that would attract beetles, and selecting or breeding for pitch canker resistant individuals and species.